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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,581	12/29/2000	Brana Kukic	NC30313	8375

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DARBY & DARBY P.C.
P.O. BOX 5257
NEW YORK, NY 10150-6257

EXAMINER

MACE, BRAD THOMAS

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,581

Applicant(s)

KUKIC, BRANA

Examiner

Brad T. Mace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 12 and 16-18 is/are allowed.
- 6) ☒ Claim(s) 9-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on July 27, 2004. These drawings are acceptable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9, 10, 13, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,002,670 (Rahman et al.) in view of U.S. Patent No. 6,580,688 (Klink).

Regarding claims 9, 10, 13:

Rahman et al. discloses a system for determining an optimal transmission rate for passing a cell stream from a first location to a second location at a desired transmission rate (Figure 3, col. 3, lines 58-62 and col. 2, lines 17-21, where the transmission links whose transmission parameters meets one or more preset requirements (desired transmission rate) and where maximum transmission rate and desired transmission rate are transmission parameters), the system comprising:

a first unit at the first location coupled to one end of each of a plurality of low capacity data links for assisting in determining characteristics of each of the links using a test signal transmitted over each of the links (Figure 3, reference 10 and col. 2, lines 57-62);

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a second unit at the second location coupled to the other end of each of the links for assisting in determining the characteristics of each of the links based on the characteristic of the test signal received at the second unit (Figure 3, reference 14, and col. 2, lines 57-62); and

a processor coupled to the second unit for determining the optimal transmission rate based on the characteristics of the links and the number of links needed to provide the desired transmission rate (Figure 3, reference 14, and col. 2, lines 57-62, where the IMA assists in determining the characteristics of each of the links (such as delay), hence has processing capabilities (processor));

wherein the first unit receives an ATM cell stream and inverse multiplexes the cell stream over the links that are trained (Figure 3, references 10, 12, 14, and input "ATM cells" and col. 3, lines 55-57, where the links are provisioned) and wherein the second unit receives and multiplexes the inverse multiplexed cell stream from each of the active trained data links to produce the cell stream (Figure 3, references 10, 12, 14, and output "ATM cells"),

wherein the first unit receives an ATM cell stream and inverse multiplexes the cell stream over the links that are trained at the optimal rate and wherein the second unit receives and multiplexes the inverse multiplexed cell stream from each of the active trained data links to produce the cell stream (Figure 3, references 10, 12, 14, and input and output "ATM cells", and also col. 3, line 55-57, where optimal rate is a transmission characteristic parameter possible for provisioning transmission links).

However, Rahman et al. does not disclose expressly at least one data link selected from the plurality of low capacity data links that is set to idle status, wherein the first unit and the second unit switch to use the idle data link to replace any one of the active data links that has failed and wherein the status of the idle data link is changed to active.

Klink discloses at least one data link selected from the plurality of low capacity data links that is set to idle status, wherein the first unit and the second unit switch to use the idle data link to replace any one of the active data links that has failed and wherein the status of the idle data link is changed to active (Figure 1a, references "PE", "W", and "E", and col. 3, lines 43-48).

A person of ordinary skill in the art would have been motivated to employ Klink in Rahman et al. in order to obtain an ATM inverse multiplexing system that incorporates an idle trained data link. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Klink with Rahman et al. (collectively Rahman et al.-Klink) in order to obtain the invention as specified in claim 9. The suggestion/motivation to do so would have been to obtain an ATM inverse multiplexing system that incorporates an idle trained data link so as to provide a robust system that allows the continued transmission of data on a standby link when a fault occurs on an active link (col. 1, lines 47-59).

Regarding claims 14, 15:

Rahman et al. further discloses that one subset of transmission links can be selected among all the subsets determined for activation of inverse multiplexing in

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response to the chosen criteria (desired transmission rate) (col. 5, lines 10-12, since activation can only occur if the chosen criteria is met, hence the total available transmission rate is at least equal to the desired transmission rate. Also, since a subset of transmission links are used to obtain the total available transmission rate, the sum of the transmission links constitutes the total available transmission rate).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,002,670 (Rahman et al.) in view of U.S. Patent No. 6,580,688 (Klink) and as applied to claims 9, 10 above, and further in view of U.S. Patent No. 6,813,241 (Wang et al.).

Regarding claim 11:

Rahman et al. further discloses wherein the failed active data link is repaired (col. 3, lines 42-43) and where the optimal rate is a possible transmission characteristic parameter for provisioning transmission links (col. 3, lines 55-57, hence the failed link would be trained at the optimal rate), however, Rahman et al. does not disclose expressly wherein the failed active data link is set to idle status.

Wang et al. discloses a monitor that determines when to revert to the working data link after recovery from a failure (Figure 8, and col. 3, lines 5-10, where the data link has recovered from a failure and the monitor determines when to revert to it, hence when the recovered data link has not be reverted to, the recovered data link becomes an idle link).

A person of ordinary skill in the art would have been motivated to employ Wang et al. in Rahman et al. - Klink et al. to set the recovered data link to an idle data link. At

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the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Wang et al. with Rahman et al. - Klink et al. (collectively Rahman et al. - Klink et al. - Wang et al.) to obtain the invention as specified in claims 9, 10, and 11. The suggestion/motivation to do so would have been to decide the best time to revert to the recovered data link (col. 3, lines 7-10), thus setting it idle so that it is ready for changeover.

Response to Arguments

6. Applicant's arguments with respect to claims 9-11, and 13-15 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

7. Claims 1-8, 12, and 16-18 are allowed.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad T. Mace whose telephone number is (571) 272-3128. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btm

Brad T. Mace
Examiner
Art Unit 2663

btm
November 10, 2004



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600